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#6

SEQUENCE LISTING

<110> Mitchell, ~~TRADE~~ G.
Garcia-Blanco, Mariano A.
Puttaraju, Madaiah
Mansfield, Gary S.

<120> METHODS AND COMPOSITIONS FOR USE IN
SPLICEOSOME MEDIATED RNA TRANS-SPLICING IN PLANTS

<130> A31304-B-A-C 072874.0138

<140> 09/756,097

<141> 2001-01-08

<150> 09/158,863

<151> 1998-09-23

<150> 09/133,717

<151> 1998-08-13

<150> 09/087,233

<151> 1998-05-28

<150> 08/766,354

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Escherichia coli lacZ gene

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<211> 38
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<223> Oligonucleotide primer complimentary to the
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<211> 38

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer complimentary to the
Escherichia coli lacZ gene

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<210> 32

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer complimentary to the
Escherichia coli lacZ gene

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<210> 33

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer complimentary to the beta
HCG6 gene (accession #X00266)

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<210> 34

<211> 38
<212> DNA
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<220>
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HCG6 gene (accession #X00266)

<400> 34
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38

<210> 35
<211> 35
<212> DNA
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<220>
<223> Oligonucleotide primer complimentary to the beta
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<212> DNA
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<220>
<223> Oligonucleotide primer complimentary to the beta
HCG6 gene (accession #X00266)

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37

<210> 37
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide primer complimentary to the
Escherichia coli lacZ gene

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<210> 38

<211> 21

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<223> Oligonucleotide primer complimentary to the
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<210> 39

<211> 20

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Escherichia coli lacZ gene

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<213> Homo sapien

<400> 40

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<210> 41

<211> 35

<212> DNA

<213> Homo sapiens

<400> 41

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35

<210> 42

<211> 30
<212> DNA
<213> Homo sapiens

<400> 42
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<210> 43
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<212> DNA
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<400> 43
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51

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<211> 32
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<213> Homo sapien

<400> 44
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32

<210> 45
<211> 35
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<400> 45
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35

<210> 46
<211> 35
<212> DNA
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<400> 46
ctgacctgcg gccgcccaac tatctgaatc atgtg
35

<210> 47
<211> 32
<212> DNA
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<400> 47
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32

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<210> 49
<211> 21
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<210> 50
<211> 21
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<400> 50
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<210> 51
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<400> 51
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32

<210> 52
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<400> 52
aactagaagg cacagtcgag g

21

<210> 53
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
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gonadotropin gene 6 sequences and Corynebacterium
diphtheriae diphtheria toxin A sequence

<400> 53
gagatgttcc agggcgtgat gatg
24

<210> 54
<211> 127
<212> RNA
<213> Artificial Sequence

<220>
<223> PTM intramolecular base paired stem

<221> misc_feature
<222> (57)...(70)
<223> Loop comprising a combination of 14 nucleotides
according to specification

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120
gcugcag
127

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<211> 127
<212> RNA
<213> Artificial Sequence

<220>
<223> PTM intramolecular base paired stem

<221> misc_feature
<222> (57)...(70)
<223> Loop comprising a combination of 14 nucleotides

according to specification

<400> 55
gcuagccugg gacaaggaca cugcuucacc cgguuaguag accacagccc ugagccnnnn
60
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120
gcugcag
127

<210> 56
<211> 127
<212> RNA
<213> Artificial Sequence

<220>
<223> PTM intramolecular base paired stem

<221> misc_feature
<222> (57)...(70)
<223> Loop comprising a combination of 14 nucleotides
according to specification

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120
gcugcag
127

<210> 57
<211> 132
<212> DNA
<213> Artificial Sequence

<220>
<223> trans-spliced product containing Human chorionic
gonadotropin gene 6 sequences and Corynebacterium
diphtheriae diphtheria toxin A sequences

<400> 57
caggggacgc accaaggatg gagatgttcc agggcgctga tgatgttggtt gattcttctt
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120
tccattcaaa aa
132

<210> 58
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial Sequence derived from Escherichia coli
lacZ gene

<400> 58
gaattcggta ccatgggg
18

<210> 59
<211> 33
<212> DNA
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<220>
<223> Artificial Sequence derived from Escherichia coli
lacZ gene

<400> 59
cgtttacagg taagaggatc ctccggaggg ccc
33

<210> 60
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial Sequence derived from Escherichia coli
lacZ gene

<400> 60
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30

<210> 61
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> trans-spliced product containing Escherichia coli
lacZ gene sequences and Human chorionic

gonadotropin gene 6 exon 2 sequences

<400> 61

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<210> 62

<211> 286

<212> DNA

<213> Artificial Sequence

<220>

<223> trans-spliced product containing Escherichia coli
lacZ gene sequences

<400> 62

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120
aggcgggctt cgtctaataa tgggactggg tggatcagtc gctgattaaa tatgatgaaa
180
acgggcaacc cgtggtcggc ttacggcggg gatcttggcg atacgccgaa cgatcgccag
240
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286

<210> 63

<211> 196

<212> DNA

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<220>

<223> trans-spliced product containing Escherichia coli
lacZ gene sequences

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gtaacagtct tggcgggtttc gctaaatact ggcaggcggt tcgtcagtat ccccgtttac
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180
ttcggccacg gtgccg
196

<210> 64

<211> 420

<212> DNA
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transmembrane regulator-derived sequences and His
tag sequence

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ctcggtagca aggttaagtt taaaccgctg atcagcctcg actgtgcctt ctagttgcca
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420

<210> 65
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<210> 66
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transferase

<400> 66
Asp Tyr Lys Asp Asp Asp Lys

<210> 67

<211> 15

<212> DNA

<213> Artificial Sequence

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<223> Artificial sequence comprising sequences derived
from Escherichia coli lacZ gene

<400> 67

ggagttgatc ccgtc

15

<210> 68

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

<223> Artificial sequence comprising sequences derived
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37

<210> 69

<211> 120

<212> DNA

<213> Artificial Sequence

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<223> Binding domain of PTM

<400> 69

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60

tattaactca ttgattcaa aatattttaa atacttcctg tttcatactc tgctatgcac

120

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<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Spacer sequence of PTM

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aacattatta taacggttgct cgaa

24

<210> 71

<211> 47

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<213> Artificial Sequence

<220>

<223> Branch point, pyrimidine tract and acceptor splice
site of PTM

<400> 71

tactaactgg tacctcttct tttttttttg atatcctgca gggcggc

47

<210> 72

<211> 70

<212> DNA

<213> Artificial Sequence

<220>

<223> Donor site and spacer sequence of PTM

<400> 72

tgaacggtaa gtgttatcac cgatatgtgt ctaacctgat tcgggccttc gatacgctaa

60

gatccaccgg

70

<210> 73

<211> 260

<212> DNA

<213> Artificial Sequence

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<223> Binding domain of spacer sequence

<400> 73

tcaaaaagtt ttcacataat ttcttacctc ttcttgaatt catgctttga tgacgcttct

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120

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<210> 75
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide

<400> 75
actcagtgtg attccacctt ctc
23

<210> 76
<211> 36
<212> DNA
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<220>
<223> Oligonucleotide

<400> 76
gacctctgca gacttcactt ctaatgatga ttatgg
36

<210> 77
<211> 33
<212> DNA
<213> Artificial Sequence

<220>

<223> Oligonucleotide primer

<400> 77

ctaggatccc gttcttttgt tcttcactat taa
33

<210> 78

<211> 33

<212> DNA

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<220>

<223> Oligonucleotide primer

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ctagggttac cgaagtaaaa ccatacttat tag
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<210> 79

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer

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<210> 80

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer

<400> 80

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<210> 81

<211> 23

<212> DNA

<213> Artificial Sequence

<220>
<223> Binding domain of PTM molecule

<400> 81
acccatcatt attaggtcat tat
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<210> 82
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<212> DNA
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<220>
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<400> 82
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22

<210> 83
<211> 21
<212> DNA
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<220>
<223> Oligonucleotide primer

<400> 83
ctgatccacc cagtcccatt a
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<210> 84
<211> 22
<212> DNA
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<220>
<223> Oligonucleotide primer

<400> 84
gactgatcca cccagtcca ga
22

<210> 85
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<210> 86
<211> 71
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<220>
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71

<210> 87
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<212> DNA
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<400> 87
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66

<210> 88
<211> 192
<212> DNA
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<220>
<223> PTM sequences

<400> 88

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tccggccgca tcagcttttg cagccaattc agttggatca tgcccgggtac catcaaggag
120
aacataatct tcggcgtcag ttacgacgag taccgctatc gctcgggtgat taaggcctgt
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cagttggagg ag
192

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<400> 89
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25

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<400> 90
gagaacataa tcttcggcgt cagttacg
28

<210> 91
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<220>
<223> Oligonucleotide

<400> 91
gtcagttgga ggaggacatc tccaagtttg
30

<210> 92
<211> 192
<212> DNA

<213> Artificial Sequence

<400> 92

acgagcttgc tcatgatgat catgggcgag ttagaaccaa gtgaaggcaa gatcaaacat
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tccggccgca tcagcttttg cagccaattc agttggatca tgcccgggtac catcaaggag
120

aacataatct tcggcgtcag ttacgacgag taccgctatc gctcgggtgat taaggcctgt
180

cagttggagg ag

192

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<211> 27

<212> DNA

<213> Artificial Sequence

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<223> PTM sequences

<400> 93

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27

<210> 94

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide

<400> 94

ccaactagaa gaggacatct ccaagtttgc

30

<210> 95

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide

<400> 95

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30

<210> 96
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<220>
<223> Oligonucleotide

<400> 96
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27

<210> 97
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide

<400> 97
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27

<210> 98
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> 5' splice site

<400> 98
cgtttacagg taagtggatc c
21

<210> 99
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> 3' splice site

<400> 99
ctgcagggcg gcttcgtcta ataatgg
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<210> 100
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Sequence from trans-splicing domain

<400> 100
tactaactgg tacctcttct tttttttttg atatcctgca gggcggc
47

<210> 101
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<212> DNA
<213> Artificial Sequence

<220>
<223> CFTR PTM

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120
ccttctgttg attctgctga caatctatct gaaaaattgg aaagagaatg ggatagagag
180
ctggcttcaa agaaaaatcc taaactcatt aatgcccttc ggcgatgttt tttctggaga
240
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300
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360
atttatctag gcataggctt atgccttctc tttattgtga ggacactgct cctacacca
420
gccatttttg gccttcatca cattggaatg cagatgagaa tagctatgtt tagtttgatt
480
tataagaaga ctttaaagct gtcaagccgt gttctagata aaataagtat tggacaactt
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gttagtctcc tttccaacaa cctgaacaaa tttgatgaag gacttgcatt ggcacatttc
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gtgtggatcg ctcttttgca agtggcactc ctcatggggc taatctggga gttgttacag
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720
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 1020
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 1260
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 1320
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 1380
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 1440
 aagatcaaac attccggccg catcagcttt tgcagccaat tcagttggat catgcccggc
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 1560
 attaaggcct gtcagttgga ggag
 1584

<210> 102

<211> 323

<212> DNA

<213> Artificial Sequence

<220>

<223> trans-splicing domain of CFTR PTM

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 120
 ctgtatctat attcatcatt ggaaacacca atgatatttt cttaaatggt gcctggcata
 180
 atcctggaaa actgataaca caatgaaatt cttccactgt gcttaatttt accctctgaa
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 ttctccattt ctcccataat catcattaca actgaactct ggaaataaaa cccatcatta
 300
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323

<210> 103
<211> 165
<212> DNA
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<220>
<223> PTM binding domain

<400> 103
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cctaagcaga agtgtatatt cttatttgta aagattctat taactcattt gattcaaaat
120
atttaaaata cttcctgttt cacctactct gctatgcacc cgcg
165

<210> 104
<211> 225
<212> DNA
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<220>
<223> trans-splicing domain of CFTR PTM

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gcagaagtgt atattcttat ttgtaaagat tctattaact catttgattc aaaatattta
120
aaataacttcc tgtttcacct actctgctat gcacccgcgg aacattatta taacgttgct
180
cgaataactaa ctggtacctc ttcttttttt tttgatatcc tgcag
225

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<213> Artificial Sequence

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<223> CFTR PTM sequence

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120
aatatcatct ttggtgtttc ctatgatgaa tatagataca gaagcgtcat caaagcatgc
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480
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720
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3060

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3069